REMARKS

The claimed invention can overcome limitations of current high throughput screening crystallization platforms. The method of claim 46 includes removing solvent from solutions of first and second pluralities of systems to form a solid in each system, where one plurality of systems includes different solution concentrations but substantially the same effective A/L values, and the other plurality of systems includes different effective A/L values but substantially the same solution concentrations. Claim 46 also includes setting a value of one of the concentration or the effective A/L to be substantially the same for the second plurality of systems, where this value was different for the first plurality of systems and was associated with a system that yielded a crystal.

The effective A/L of an evaporation member in a system is proportional to the rate of evaporation of solvent from a solution in the system (Specification, p.6, lines 11-15). Thus, when systems include evaporation members having substantially the same effective A/L, the rate of evaporation from solutions in these systems is substantially the same. This is in contrast with conventional hanging drop vapor diffusion crystallization, in which the rate of evaporation is fast at first and then decreases over time (Specification, p.2, lines 19-21; p.12, lines 28-29).

Rejection under 35 U.S.C. § 103

The rejection of the claims as obvious under 35 U.S.C. § 103(a) over PCT Publication No. WO 01/88231 A2 to Bray (Bray) in view of Forsythe et al., *Acta Cryst.* (2002) D58, 1601-1605 (Forsythe) is respectfully traversed. The references do not teach or suggest removing solvent from solutions in a plurality of systems, where the systems include evaporation members having substantially the same effective A/L, but the solutions have different concentrations of the compound to be crystallized.

Bray discloses a method for kinetically controlling vapor diffusion in the crystal growth process (p.4, lines 23-24). The method includes placing a crystal

growth solution and a reservoir in vapor contact through a channel (p.5, lines 1-17). The dimensions of the channel and/or the composition of the reservoir can be controlled, and may be changed during the course of the crystallization (p.5, lines 18-19; p.6, lines 3-11, 20-27). In one set of experiments, crystal growth solutions having identical concentrations were evaporated at different rates, due to differing geometries of the channel between the crystal growth solution and the reservoir (p.13, lines 10-15). Bray does not teach setting the evaporation rate to be the same for a plurality of crystal growth systems, while varying the concentration of the substance to be crystallized between the systems.

Forsythe discloses a crystal growth method that includes varying the reservoir to droplet volume ratio in a hanging drop system (p.1601, left column, lines 39-46). Evaporation rate studies of these systems demonstrated that the evaporation rate was not constant during the crystal growth process (p.1603, left column, first paragraph in section "3. Results"). Instead, the evaporation rate decreased over time, such that polynomial analysis was attempted (Figures 1 and 2; p.1603, left column, first paragraph in section "3. Results", lines 10-14 in this paragraph). The evaporation rate for the first half of the process was extrapolated linearly (p.1603, left column, first paragraph in section "3. Results", lines 5-10 in this paragraph). Forsythe does not teach setting the evaporation rate to be the same for a plurality of crystal growth systems.

Bray and Forsythe do not teach or suggest removing solvent from solutions having different concentrations, where the solutions are in systems having substantially the same effective A/L. Bray teaches only removing solvent from identical solutions at different evaporation rates. Forsythe teaches only a hanging drop method, in which the evaporation rate varies throughout the process. As noted above, the effective A/L of an evaporation member in a system is proportional to the rate of evaporation of solvent from a solution in the system. Thus the references do not teach or suggest removing solvent from solutions of first and second pluralities of systems, where one of the pluralities includes different solution concentrations but substantially the same effective A/L.

Bray and Forsythe, alone or in combination, do not teach or suggest each and every element of the claims. Accordingly, the references cannot make obvious the pending claims, and Applicants respectfully request that this rejection be withdrawn.

CONCLUSION

All of the grounds raised in the present Office Action for rejecting the application are believed to be overcome or rendered moot based on the remarks above. Thus, it is respectfully submitted that all of the presently presented claims are in form for allowance, and such action is requested. Should the Examiner feel a discussion would expedite the prosecution of this application, the Examiner is kindly invited to contact the undersigned at (312) 876-1400.

Respectfully submitted,

Dated: May 4, 2007

SDG

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